Raphael Linker

List of Publications by Year
in descending order

98 papers	**2,585** citations	201575 **27** h-index	214721 **47** g-index
100 all docs	**100** docs citations	**100** times ranked	**2610** citing authors

#	Article	IF	Citations
1	Progressive Inhibition by Water Deficit of Cell Wall Extensibility and Growth along the Elongation Zone of Maize Roots Is Related to Increased Lignin Metabolism and Progressive Stelar Accumulation of Wall Phenolics. Plant Physiology, 2006, 140, 603-612.	2.3	201
2	Determination of the number of green apples in RGB images recorded in orchards. Computers and Electronics in Agriculture, 2012, 81, 45-57.	3.7	176
3	Determination of Protein Concentration in Raw Milk by Mid-Infrared Fourier Transform Infrared/Attenuated Total Reflectance Spectroscopy. Journal of Dairy Science, 2004, 87, 2779-2788.	1.4	139
4	Machine vision for counting fruit on mango tree canopies. Precision Agriculture, 2017, 18, 224-244.	3.1	103
5	Soil identification and chemometrics for direct determination of nitrate in soils using FTIR-ATR mid-infrared spectroscopy. Chemosphere, 2005, 61, 652-658.	4.2	98
6	Non-destructive estimation of foliar chlorophyll and carotenoid contents: Focus on informative spectral bands. International Journal of Applied Earth Observation and Geoinformation, 2015, 38, 251-260.	1.4	97
7	Monitoring tunneling induced ground displacements using distributed fiber-optic sensing. Tunnelling and Underground Space Technology, 2014, 40, 141-150.	3.0	95
8	Optimal model-based deficit irrigation scheduling using AquaCrop: A simulation study with cotton, potato and tomato. Agricultural Water Management, 2016, 163, 236-243.	2.4	93
9	Mid-infrared Spectroscopic Determination of Soil Nitrate Content. Biosystems Engineering, 2006, 94, 505-515.	1.9	75
10	Identification of agricultural Mediterranean soils using mid-infrared photoacoustic spectroscopy. Geoderma, 2008, 143, 85-90.	2.3	71
11	Feasibility study of automated detection of tunnel excavation by Brillouin optical time domain reflectometry. Tunnelling and Underground Space Technology, 2010, 25, 575-586.	3.0	63
12	Informative spectral bands for remote green LAI estimation in C3 and C4 crops. Agricultural and Forest Meteorology, 2016, 218-219, 243-249.	1.9	62
13	Comparison of three evapotranspiration models for a greenhouse cooling strategy with natural ventilation and variable high pressure fogging. Scientia Horticulturae, 2012, 134, 210-221.	1.7	56
14	Vision-based localisation of mature apples in tree images using convexity. Biosystems Engineering, 2014, 118, 174-185.	1.9	54
15	Characterization of Soils Using Photoacoustic Mid-Infrared Spectroscopy. Applied Spectroscopy, 2007, 61, 1063-1067.	1.2	53
16	Simulated performance of a greenhouse cooling control strategy with natural ventilation and fog cooling. Biosystems Engineering, 2012, 111, 217-228.	1.9	49
17	Optimal CO2 control in a greenhouse modeled with neural networks. Computers and Electronics in Agriculture, 1998, 19, 289-310.	3.7	46
18	Fourier Transform Infrared—Attenuated Total Reflection Nitrate Determination of Soil Pastes Using Principal Component Regression, Partial Least Squares, and Cross-Correlation. Applied Spectroscopy, 2004, 58, 516-520.	1.2	46

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19	Nitrate Determination in Soil Pastes using Attenuated Total Reflectance Mid-infrared Spectroscopy: Improved Accuracy via Soil Identification. Biosystems Engineering, 2006, 94, 111-118.	1.9	45
20	Robust controllers for simultaneous control of temperature and CO2 concentration in greenhouses. Control Engineering Practice, 1999, 7, 851-862.	3.2	42
21	Greenhouse temperature modeling: a comparison between sigmoid neural networks and hybrid models. Mathematics and Computers in Simulation, 2004, 65, 19-29.	2.4	39
22	Hamilton–Jacobi–Bellman formalism for optimal climate control of greenhouse crop. Automatica, 2009, 45, 1227-1231.	3.0	37
23	Robust climate control of a greenhouse equipped with variable-speed fans and a variable-pressure fogging system. Biosystems Engineering, 2011, 110, 153-167.	1.9	35
24	Apple detection in nighttime tree images using the geometry of light patches around highlights. Computers and Electronics in Agriculture, 2015, 114, 154-162.	3.7	31
25	Discrimination of Soil-Borne Fungi Using Fourier Transform Infrared Attenuated Total Reflection Spectroscopy. Applied Spectroscopy, 2008, 62, 302-305.	1.2	30
26	Machine learning based analysis of night-time images for yield prediction in apple orchard. Biosystems Engineering, 2018, 167, 114-125.	1.9	30
27	Efficient model-based sub-optimal irrigation scheduling using imperfect weather forecasts. Computers and Electronics in Agriculture, 2016, 130, 118-127.	3.7	29
28	Operational Precise Irrigation for Cotton Cultivation through the Coupling of Meteorological and Crop Growth Models. Water Resources Management, 2017, 31, 563-580.	1.9	29
29	A procedure for estimating the number of green mature apples in night-time orchard images using light distribution and its application to yield estimation. Precision Agriculture, 2017, 18, 59-75.	3.1	28
30	Predicting Gross Nitrogen Mineralization and Potentially Mineralizable Nitrogen using Soil Organic Matter Properties. Soil Science Society of America Journal, 2017, 81, 1115-1126.	1.2	28
31	Assimilation of canopy cover and biomass measurements in the crop model AquaCrop. Biosystems Engineering, 2017, 162, 57-66.	1.9	24
32	Toward Generic Models for Green LAI Estimation in Maize and Soybean: Satellite Observations. Remote Sensing, 2017, 9, 318.	1.8	24
33	Impact of the non-measured infrared spectral range of the imaginary refractive index on the derivation of the real refractive index using the Kramers–Kronig transform. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 1147-1161.	1.1	23
34	Path-planning algorithm for vehicles operating in orchards. Biosystems Engineering, 2008, 101, 152-160.	1.9	22
35	Determination of Soil Nitrate and Water Content Using Attenuated Total Reflectance Spectroscopy. Applied Spectroscopy, 2006, 60, 1267-1272.	1.2	20
36	Detection of Sinkhole Formation by Strain Profile Measurements Using BOTDR: Simulation Study. Journal of Engineering Mechanics - ASCE, 2017, 143, .	1.6	18

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37	Model-Based Deficit Irrigation of Maize in Kansas. Transactions of the ASABE, 2017, 60, 2011-2022.	1.1	18
38	Unified framework for model-based optimal allocation of crop areas and water. Agricultural Water Management, 2020, 228, 105859.	2.4	18
39	Description and calibration of a dynamic model for lettuce grown in a nitrate-limiting environment. Mathematical and Computer Modelling, 2004, 40, 1009-1024.	2.0	17
40	Evaluation of the Nicolet Model for Simulation of Short-term Hydroponic Lettuce Growth and Nitrate Uptake. Biosystems Engineering, 2006, 95, 323-337.	1.9	17
41	Heterogeneous oxidation of the insecticide cypermethrin as thin film and airborne particles by hydroxyl radicals and ozone. Physical Chemistry Chemical Physics, 2011, 13, 506-517.	1.3	17
42	Modeling the effect of abrupt changes in nitrogen availability on lettuce growth, root–shoot partitioning and nitrate concentration. Agricultural Systems, 2005, 86, 166-189.	3.2	16
43	Optimal Irrigation with Perfect Weekly Forecasts versus Imperfect Seasonal Forecasts. Journal of Water Resources Planning and Management - ASCE, 2019, 145, .	1.3	16
44	Extraction of optical constants from mid-IR spectra of small aerosol particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 415-426.	1.1	15
45	A Novel Method Combining FTIR-ATR Spectroscopy and Stable Isotopes to Investigate the Kinetics of Nitrogen Transformations in Soils. Soil Science Society of America Journal, 2014, 78, 54-60.	1.2	15
46	Robust model-based failure detection and identification in greenhouses. Computers and Electronics in Agriculture, 2000, 26, 255-270.	3.7	14
47	Comparison of Various Stochastic Approaches for Irrigation Scheduling Using Seasonal Climate Forecasts. Journal of Water Resources Planning and Management - ASCE, 2018, 144, .	1.3	14
48	Sub-optimal model-based deficit irrigation scheduling with realistic weather forecasts. Irrigation Science, 2018, 36, 349-362.	1.3	13
49	A comparison between spatial clustering models for determining N-fertilization management zones in orchards. Precision Agriculture, 2021, 22, 99-123.	3.1	13
50	Combinatorial Optimization and Performance Analysis of a Multi-arm Cartesian Robotic Fruit Harvester–Extensions of Graph Coloring. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 82, 399-411.	2.0	12
51	In situ Evaluation of Net Nitrification Rate in Terra Rossa Soil Using a Fourier Transform Infrared Attenuated Total Reflection 15N Tracing Technique. Applied Spectroscopy, 2009, 63, 1168-1173.	1.2	11
52	Robust feedback stabilization of an unmanned motorcycle. Control Engineering Practice, 2010, 18, 970-978.	3.2	11
53	Estimating drift of airborne pesticides during orchard spraying using active Open Path FTIR. Atmospheric Environment, 2016, 142, 264-270.	1.9	11
54	Potential and limitation of mid-infrared attenuated total reflectance spectroscopy for real time analysis of raw milk in milking lines. Journal of Dairy Research, 2009, 76, 42-48.	0.7	10

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55	Real Time Monitoring of N_2O Emissions from Agricultural Soils using FTIR Spectroscopy. Soil Science Society of America Journal, 2014, 78, 61-69.	1.2	10
56	Characterization of archaeological waterlogged wooden objects exposed on the hyper-saline Dead Sea shore. Journal of Archaeological Science: Reports, 2016, 9, 73-86.	0.2	10
57	Inflation method based on confidence intervals for data assimilation in soil hydrology using the ensemble Kalman filter. Vadose Zone Journal, 2020, 19, e20000.	1.3	10
58	Estimation of the Number of Apples in Color Images Recorded in Orchards. International Federation for Information Processing, 2011, , 630-642.	0.4	10
59	Nitrate Determination Using Anion Exchange Membrane and Mid-Infrared Spectroscopy. Applied Spectroscopy, 2006, 60, 1008-1012.	1.2	9
60	Expansion of cracks in chicken eggs exposed to sub-atmospheric pressure. Biosystems Engineering, 2012, 112, 278-284.	1.9	9
61	In-situ open path FTIR measurements of the vertical profile of spray drift from air-assisted sprayers. Biosystems Engineering, 2018, 169, 32-41.	1.9	9
62	Stochastic model-based optimization of irrigation scheduling. Agricultural Water Management, 2021, 243, 106480.	2.4	9
63	Feasibility study of the automated detection and localization of underground tunnel excavation using Brillouin optical time domain reflectometer. Proceedings of SPIE, 2009, , .	0.8	8
64	Direct Estimation of Local pH Change at Infection Sites of Fungi in Potato Tubers. Phytopathology, 2017, 107, 132-137.	1.1	8
65	Genetic Operator-Based Particle Filter Combined with Markov Chain Monte Carlo for Data Assimilation in a Crop Growth Model. Agriculture (Switzerland), 2020, 10, 606.	1.4	8
66	Observer-based robust failure detection and isolation in greenhouses. Control Engineering Practice, 2002, 10, 519-531.	3.2	7
67	Water Stress Detection in a Greenhouse by a Step Change of Ventilation. Biosystems Engineering, 2003, 84, 79-89.	1.9	7
68	Robust Stabilization of an Unmanned Motorcycle. , 2008, , .		7
69	Quantitative estimation of protein fouling of ultra-filtration membranes by photoacoustic spectroscopy. Desalination, 2011, 271, 231-235.	4.0	7
70	A multiscale analysis of herbaceous species richness in a Mediterranean ecosystem. Journal of Plant Ecology, 2013, 6, 113-121.	1.2	7
71	Reconstruction of passive open-path FTIR ambient spectra using meteorological measurements and its application for detection of aerosol cloud drift. Optics Express, 2015, 23, A916.	1.7	7
72	Detection and quantification of water-based aerosols using active open-path FTIR. Scientific Reports, 2016, 6, 25110.	1.6	7

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73	Excitation–Emission–Matrix Fluorescence Spectroscopy of Soil Water Extracts to Predict Nitrogen Mineralization Rates. Soil Science Society of America Journal, 2018, 82, 126-135.	1.2	7
74	Spectrum analysis by recursively pruned extended auto-associative neural network. Journal of Chemometrics, 2005, 19, 492-499.	0.7	6
75	Waveband Selection for Determination of Nitrate in Soil Using Mid-Infrared Attenuated Total Reflectance Spectroscopy. Applied Spectroscopy, 2004, 58, 1277-1281.	1.2	5
76	Determination of Nitrate Concentration in Soil via Photoacoustic Spectroscopy Analysis of Ion Exchange Membranes. Applied Spectroscopy, 2008, 62, 248-250.	1.2	5
77	Detection of tunnel excavation using fiber optic reflectometry: experimental validation. , 2013, , .		5
78	Development of a laser-induced fluorescence imaging system for root activity and rhizosphere visualisation. Biosystems Engineering, 2013, 114, 466-473.	1.9	5
79	Minimum Time Kinematic Motions of a Cartesian Mobile Manipulator for a Fruit Harvesting Robot. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2014, 136, .	0.9	5
80	Autonomous Multi-Robot System for use in Vineyards and Orchards. , 2019, , .		5
81	Soil Classification Via Mid-infrared Spectroscopy. , 2007, , 1137-1146.		5
82	Robust Simultaneous Control of Temperature and CO_2 Concentration in Greenhouses. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 31-36.	0.4	3
83	Optimal Path Planning for Car-like Off-road Vehicles. , 2008, , .		3
84	Forecasting the potential of apple fruitlet drop by in-situ Vis-NIR spectroscopy. Computers and Electronics in Agriculture, 2020, 169, 105225.	3.7	3
85	Feasibility study of detection of hazardous airborne pollutants using passive open-path FTIR. , 2010, , .		2
86	Model-based optimal delineation of drip irrigation management zones. Precision Agriculture, 2021, 22, 287-305.	3.1	2
87	Robust Failure Detection and Identification in a Greenhouse Modeled with Hybrid Physical/Neural Network Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 173-178.	0.4	1
88	Validation of a BOTDR-based system for the detection of smuggling tunnels. Proceedings of SPIE, 2010, , .	0.8	1
89	Optimal Rigid Body Precise Displacement - Minimization of Electrical Energy. IFAC-PapersOnLine, 2017, 50, 753-757.	0.5	1
90	Selection of Vis-NIR wavebands for forecasting apple fruitlet drop in response to chemical treatment. Biosystems Engineering, 2020, 195, 172-185.	1.9	1

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91	Estimation of apple orchard yield using night time imaging. , 2015, , 533-540.		1
92	Root Shoot Partitioning and Nitrate Concentration in Lettuce. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 83-88.	0.4	0
93	ANALYSIS of Soil Fourier Transform Infrared/Attenuated Total Reflection Spectral Data using Wavelet Analysis to Determine Soil Nitrate Content. , 2005, , .		0
94	New directions for improving the management of agricultural soils. Plant and Soil, 2008, 307, 255-257.	1.8	0
95	Extension of statistical process control (SPC) methodology to dynamic systems controlled via output feedback. , 2008, , .		0
96	Design and Validation of Robust Controllers for Fog and Ventilation in Mechanically Ventilated Greenhouses. , 2011, , .		0
97	Development of an Object-Oriented Version of TOMGRO for a Web-based Decision Support System. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 121-126.	0.4	0
98	A simulation study on the use of co-state variables as strategic setpoints for tomato greenhouses. International Journal of Sustainable Agricultural Management and Informatics, 2015, 1, 163.	0.1	0